

KIC 008832417

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
008832417-01	OBS	No	686.484541	137.650434	48953.6	3.872	27.2	29.5	3.14	7241	119.56	7.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008832417-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

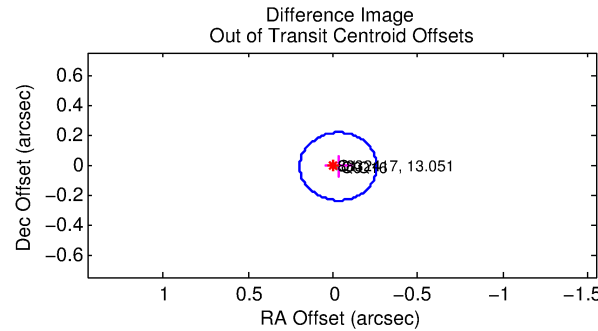
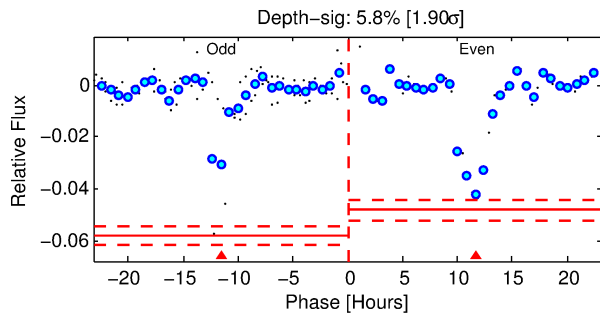
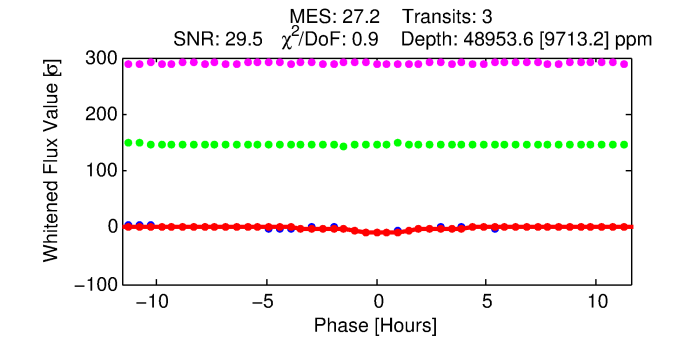
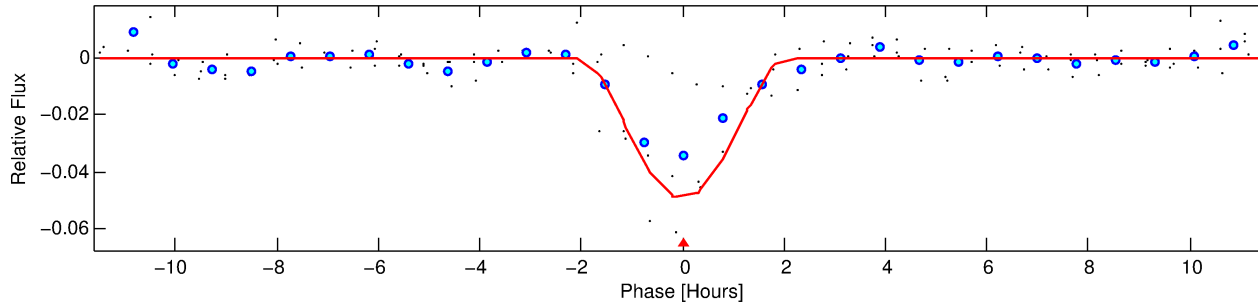
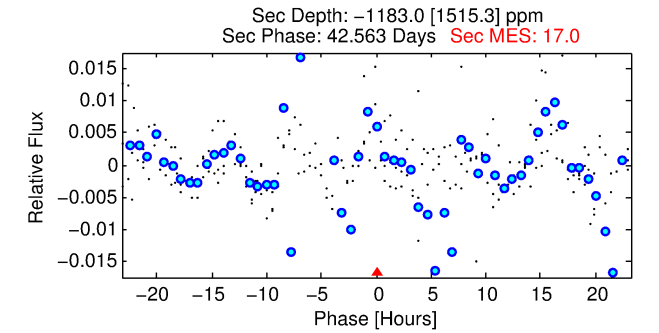
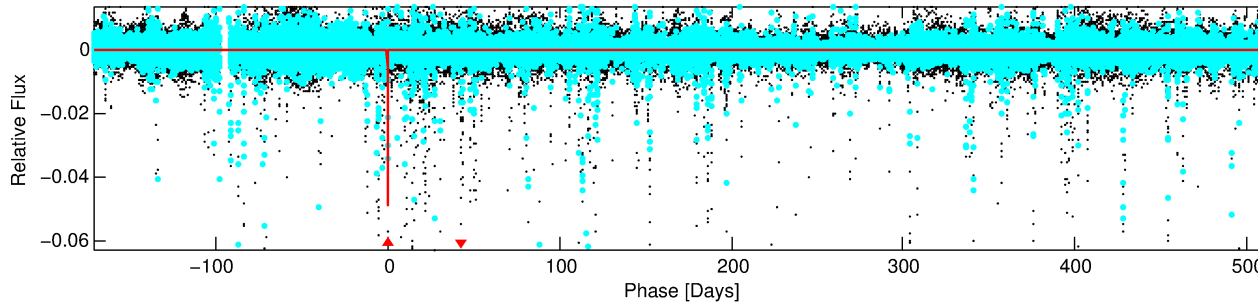
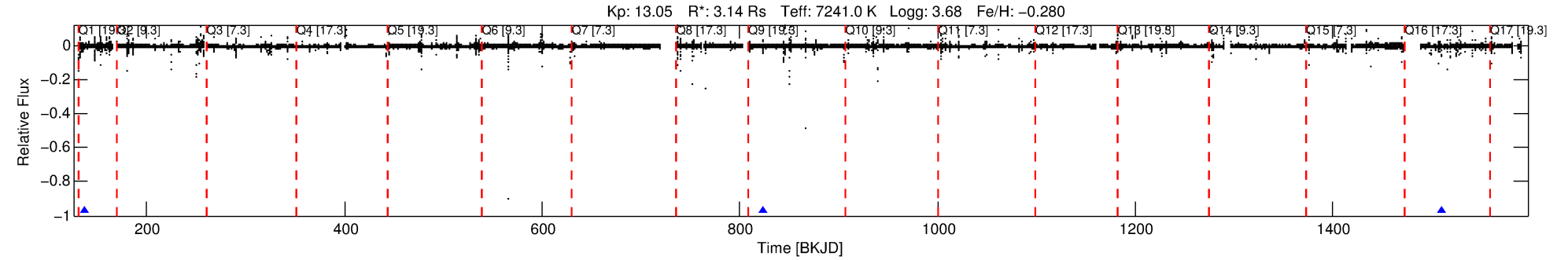
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008832417-01

No Significant Match Found

DV One-Page Summary

KIC: 8832417 Candidate: 1 of 1 Period: 686.485 d



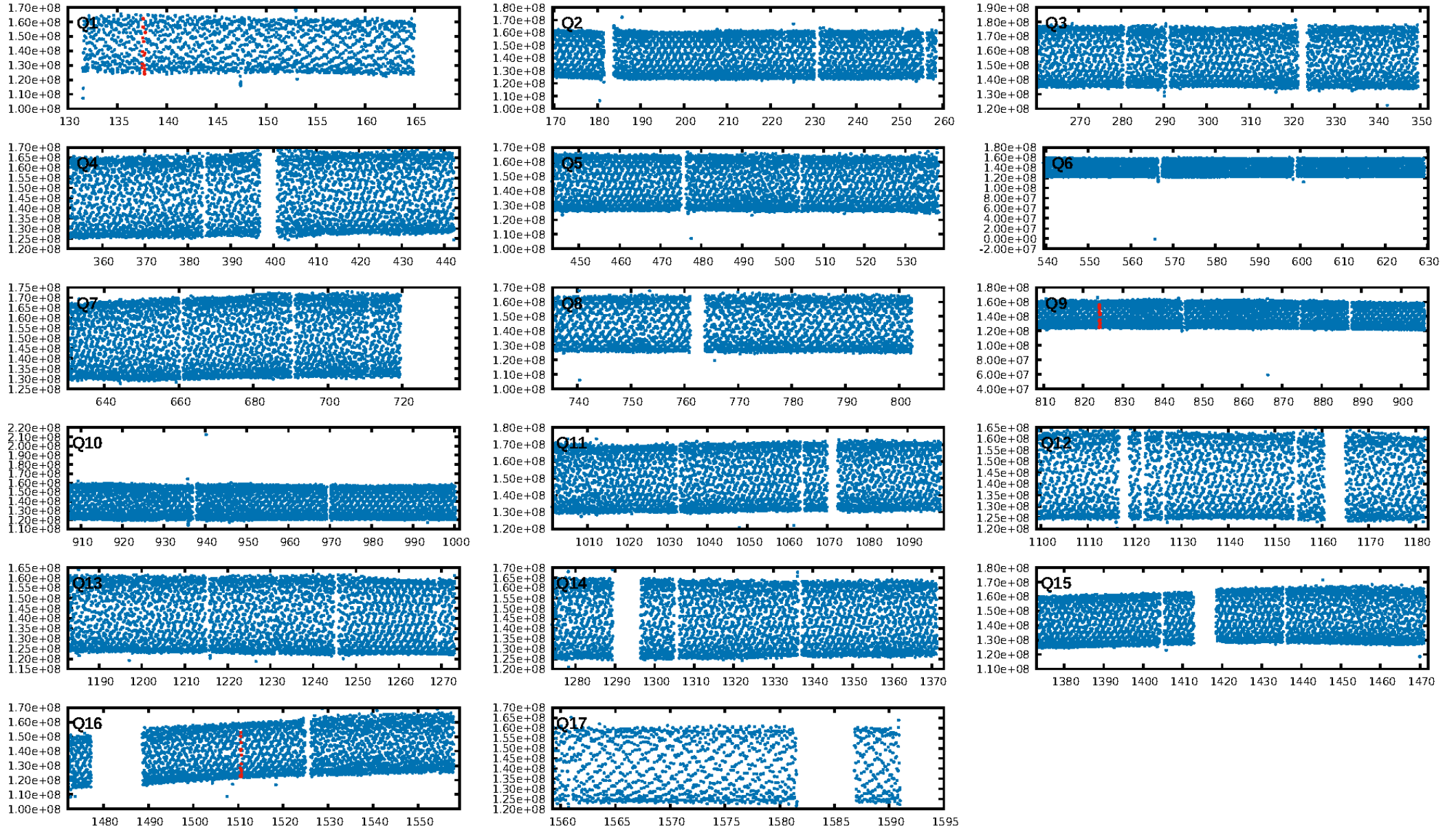
DV Fit Results:

Period = 686.48454 [0.00254] d
Epoch = 137.6504 [0.0036] BKJD
Rp/R* = 0.3485 [0.9644]
a/R* = 1225.51 [71.15]
b = 1.00 [1.25]
Seff = 7.33 [6.43]
Teq = 420 [92] K
Rp = 119.56 [336.37] Re
a = 1.8229 [0.9460] AU
Ag = N/A
Teffp = N/A

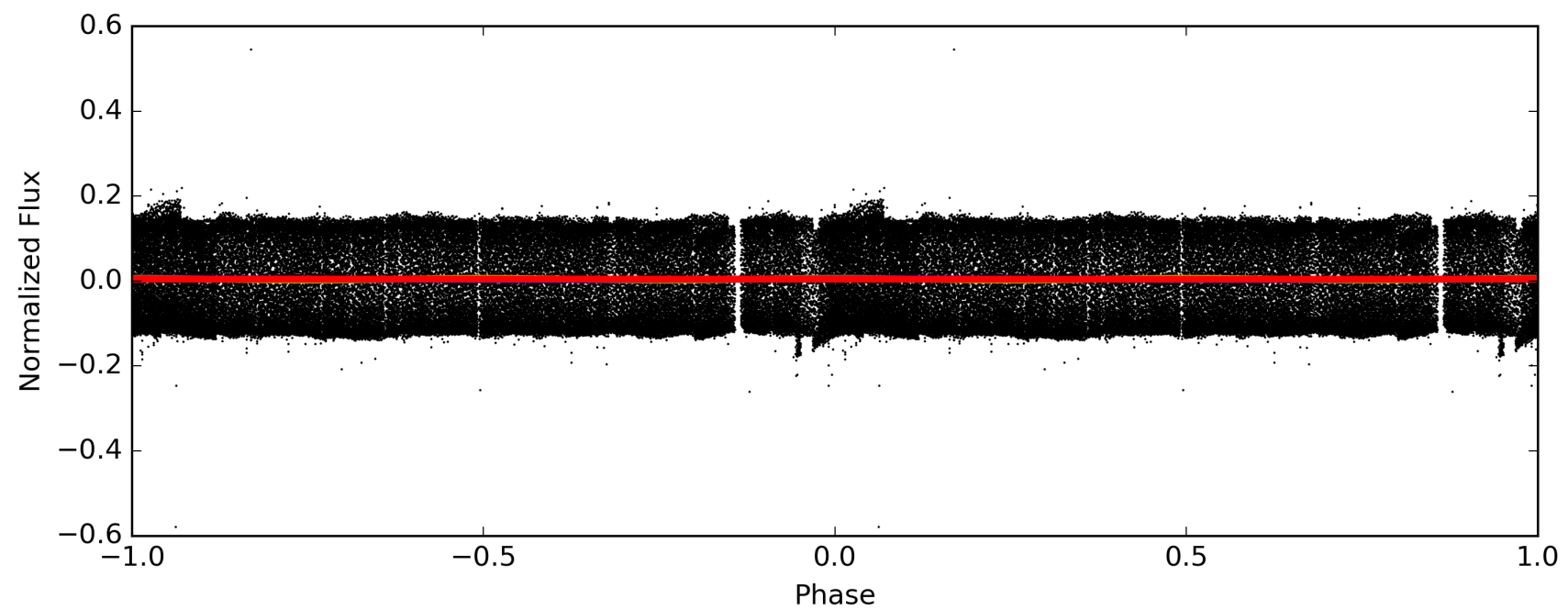
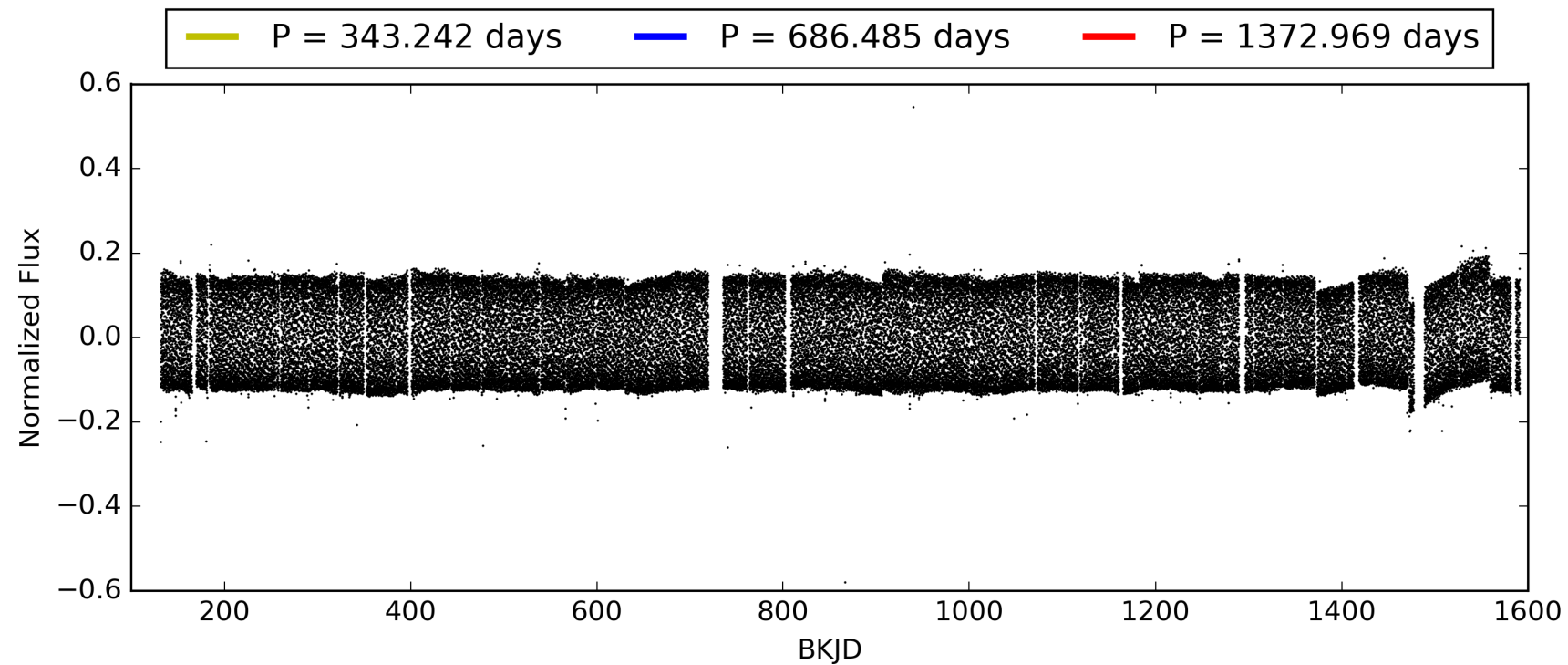
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 42.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.57e-06
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.731
Centroid-sig: 69.7%
Centroid-so: 0.127 arcsec [12.31 σ]
OotOffset-rm: 0.033 arcsec [0.44 σ]
KicOffset-rm: 0.130 arcsec [1.83 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008832417-01, PDC Light Curves

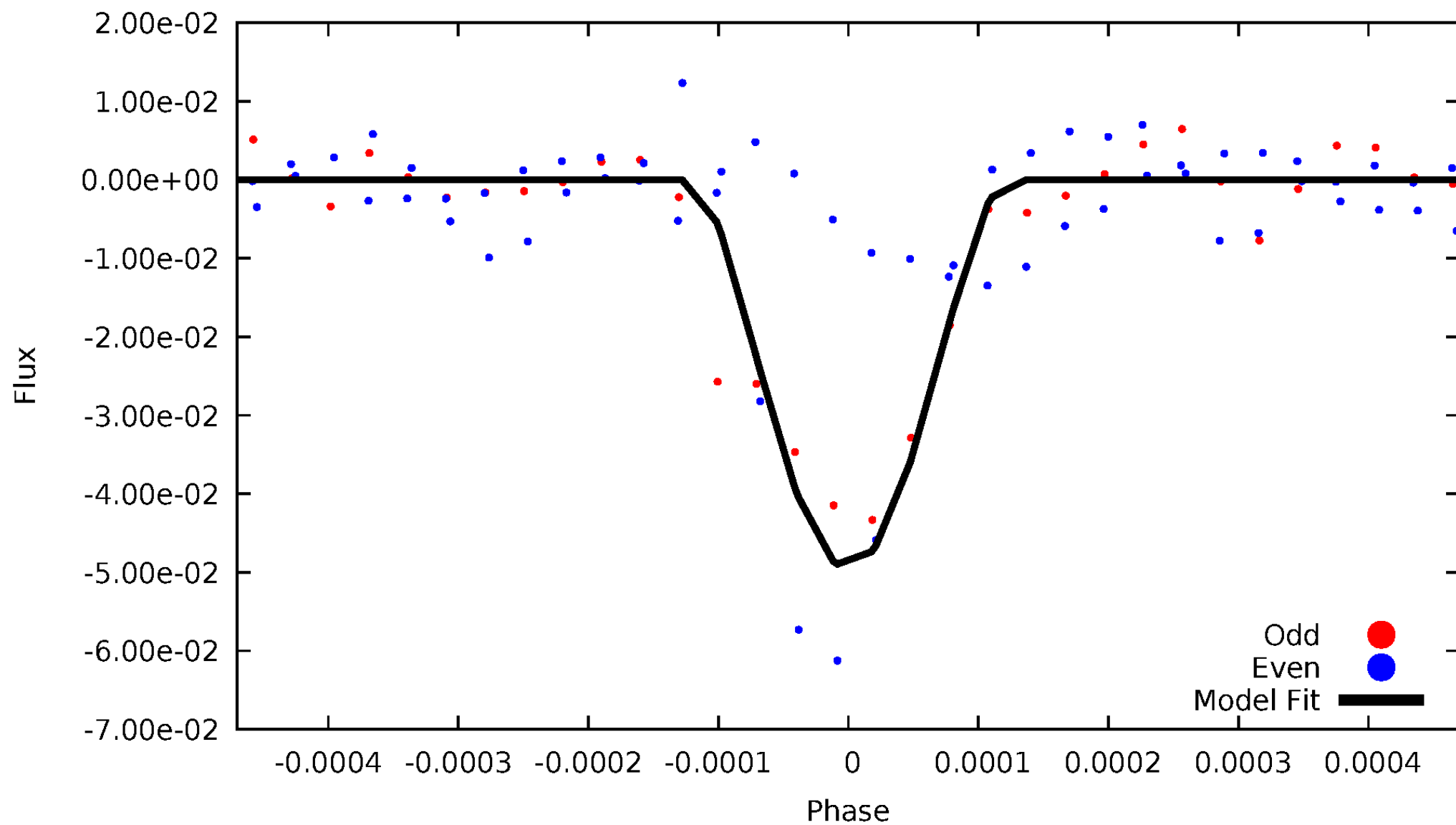


TCE 008832417-01



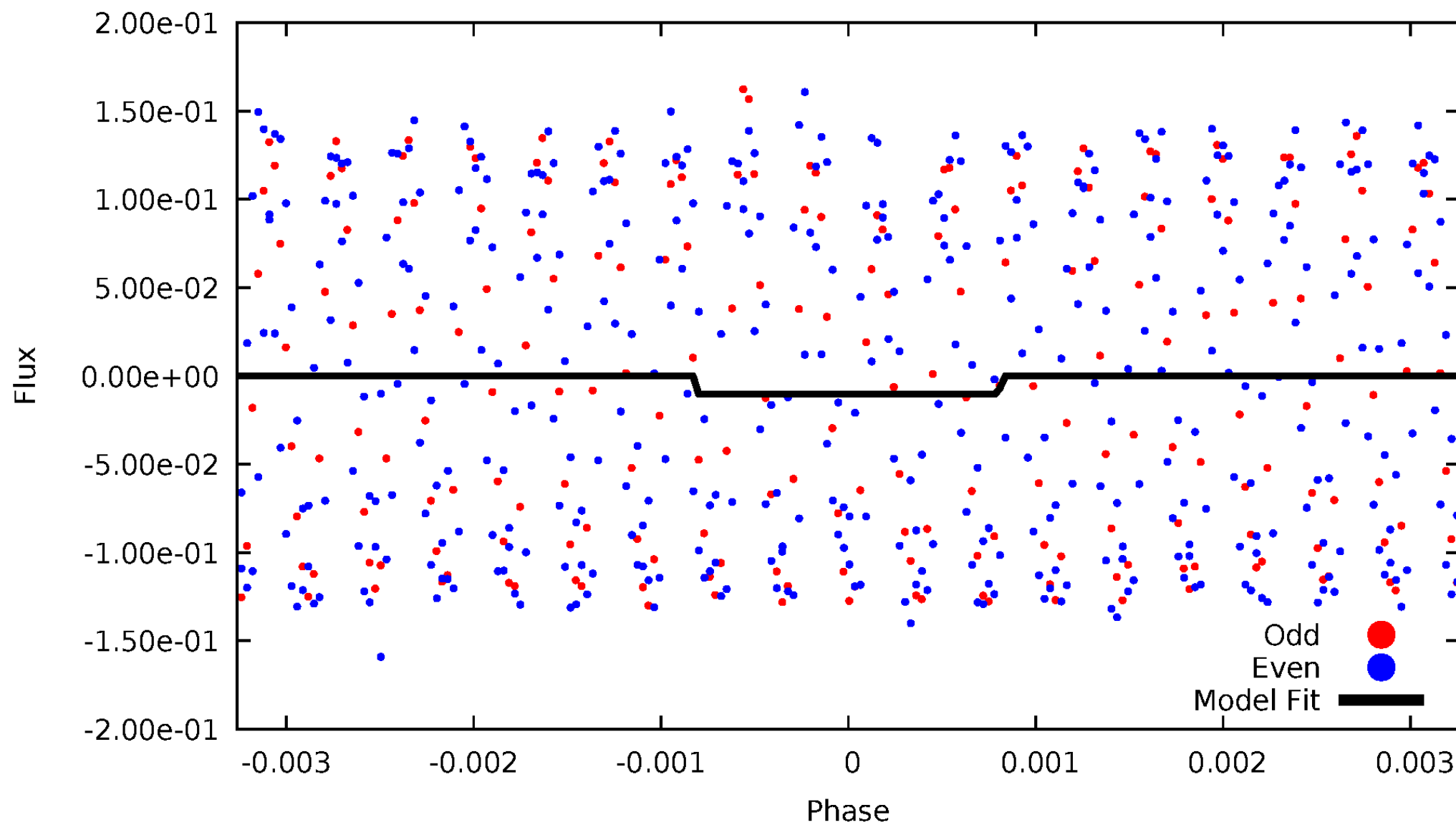
DV Odd/Even

TCE 008832417-01



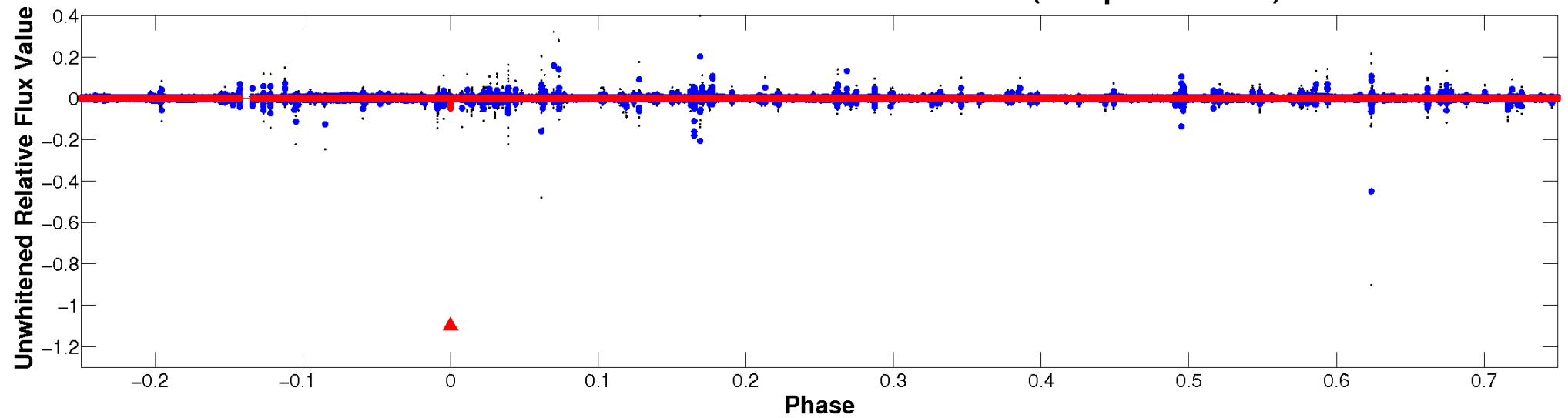
ALT Odd/Even

TCE 008832417-01

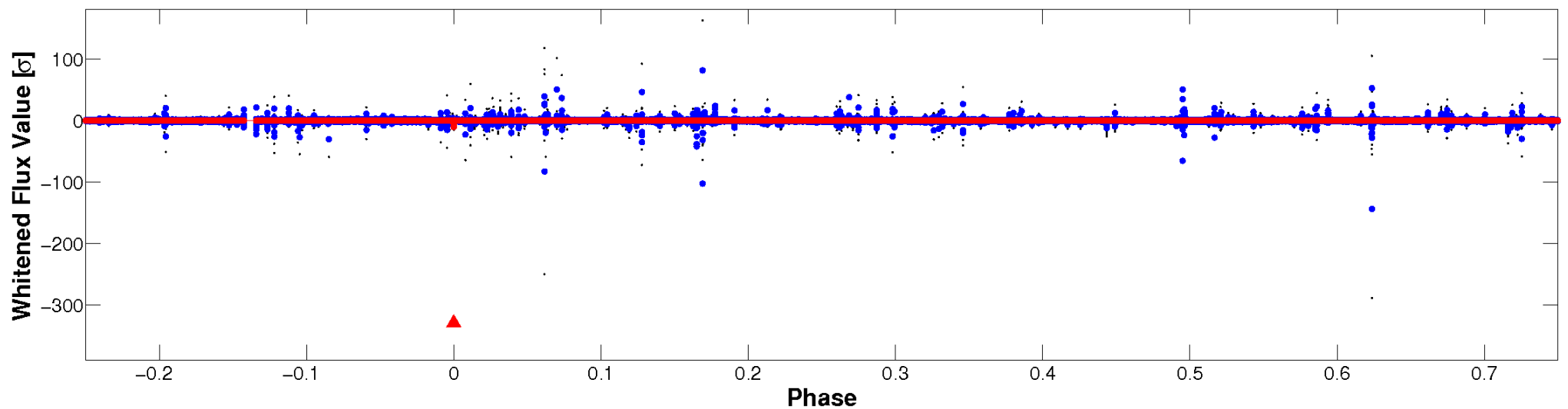


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

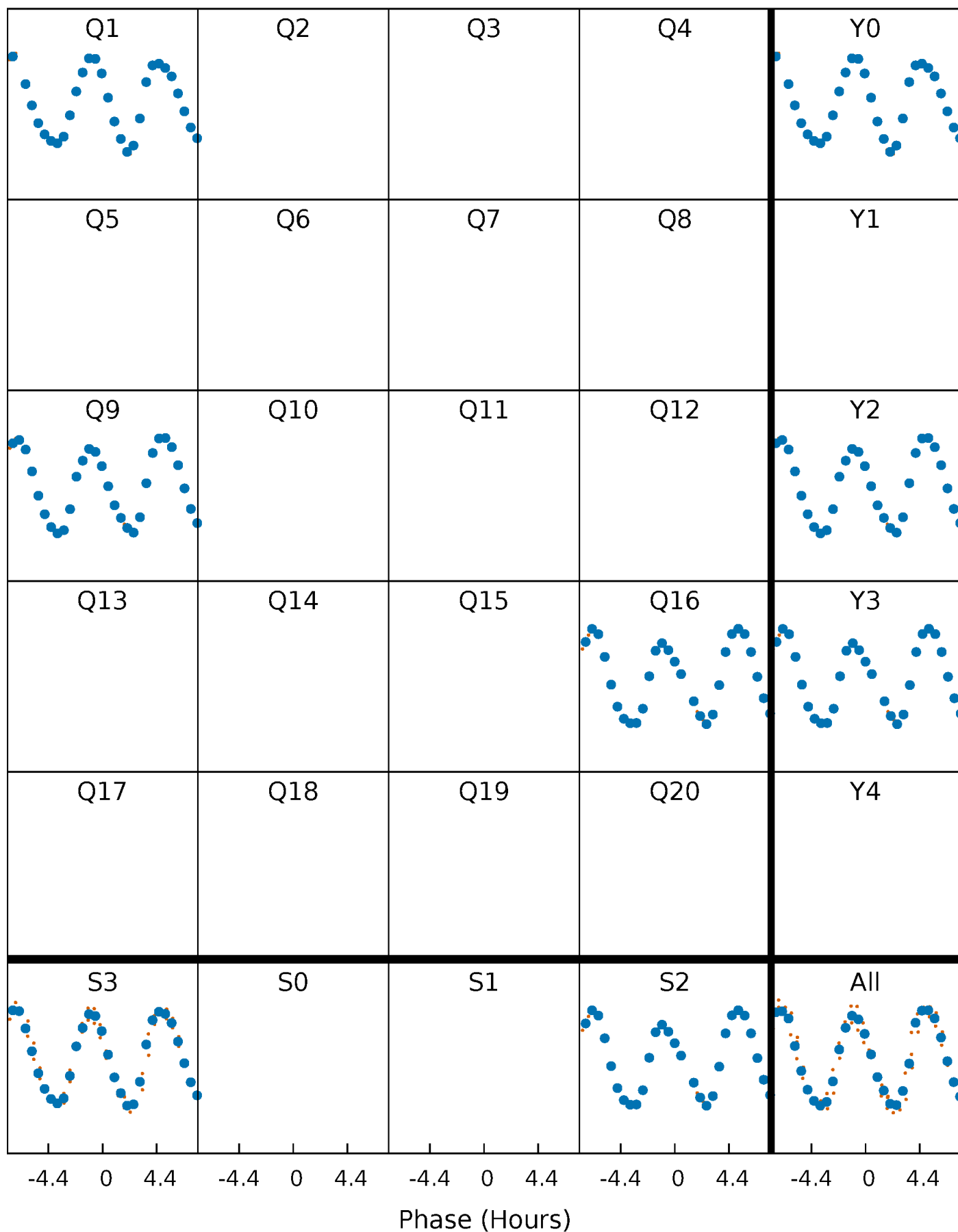


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



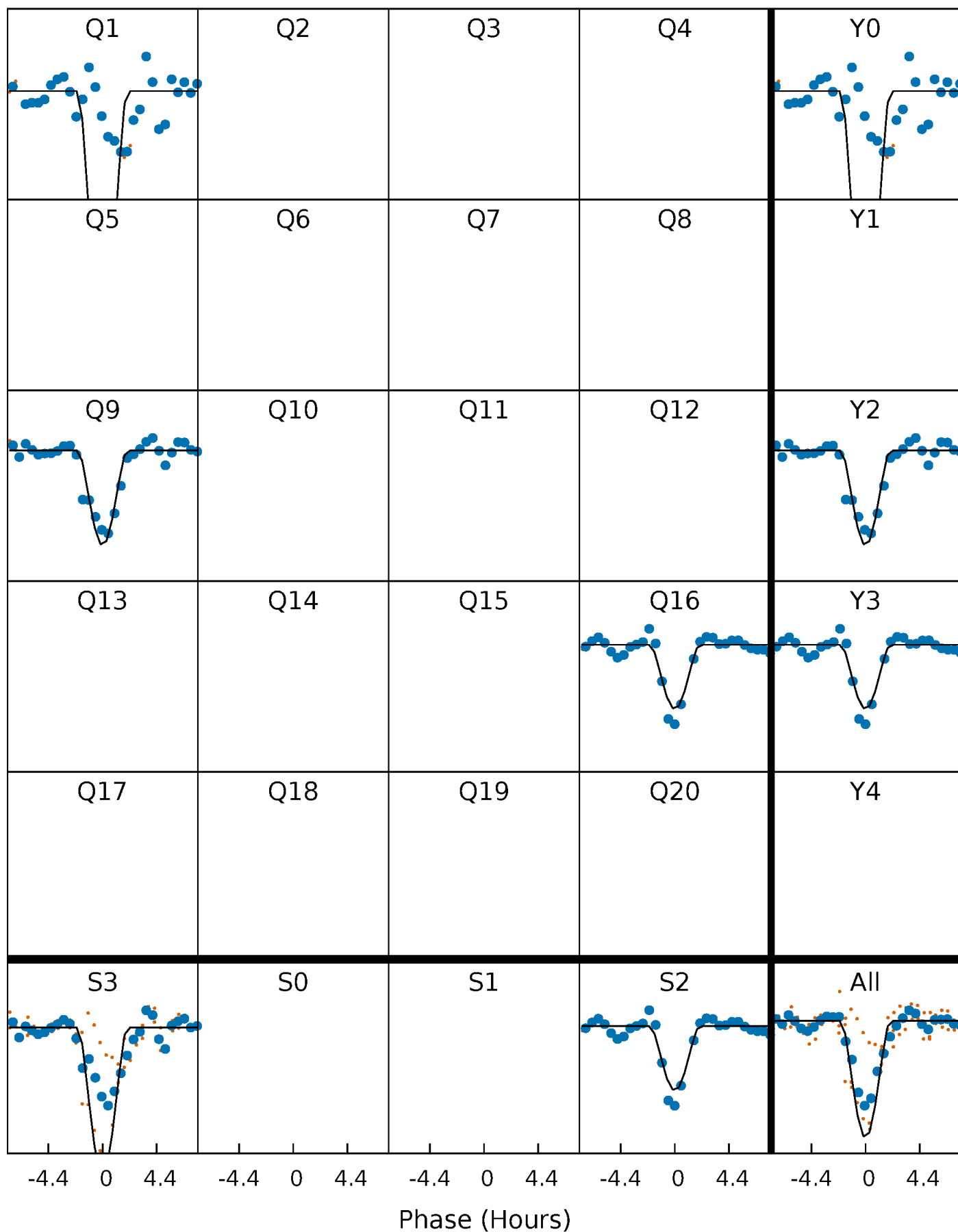
PDC Quarter-Phased Transit Curves

TCE 008832417-01 P=686.484541 Days $T_0=137.650434$ (BKJD)



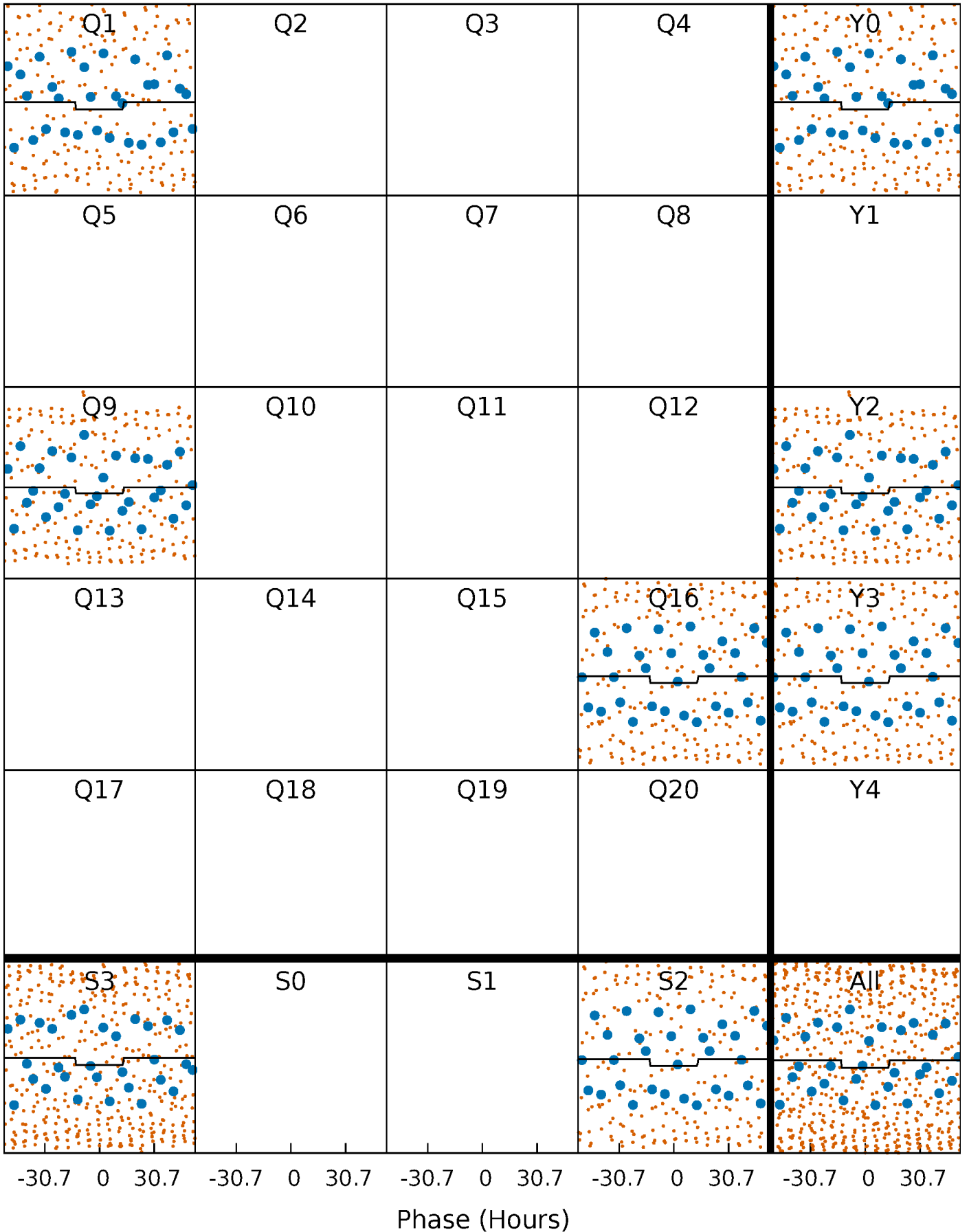
DV Quarter-Phased Transit Curves

TCE 008832417-01 P=686.484541 Days $T_0=137.650434$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

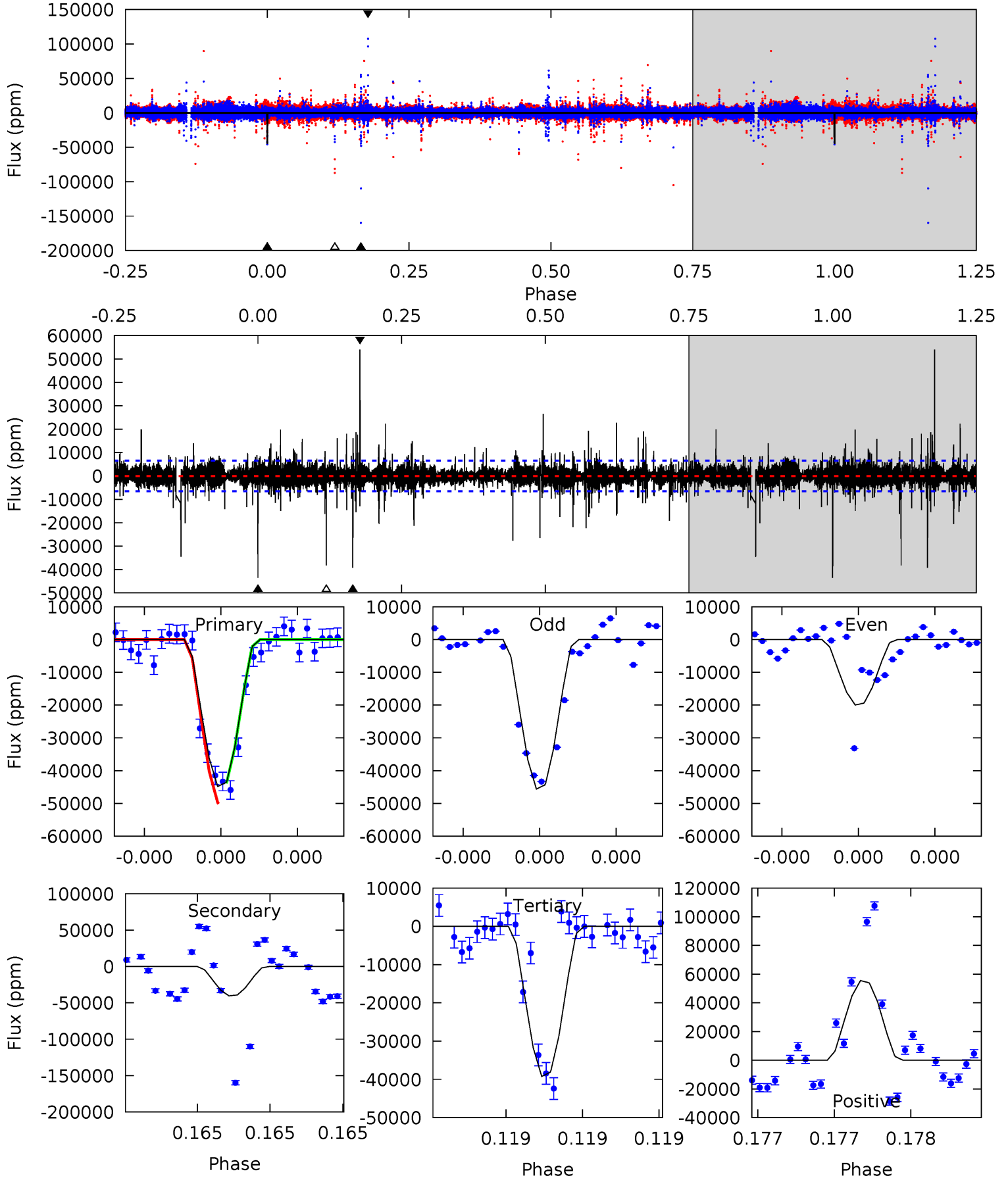
TCE 008832417-01 P=686.465448 Days $T_0=137.515674$ (BKJD)



DV Model-Shift Uniqueness Test

008832417-01, P = 686.484541 Days, E = 137.650434 Days

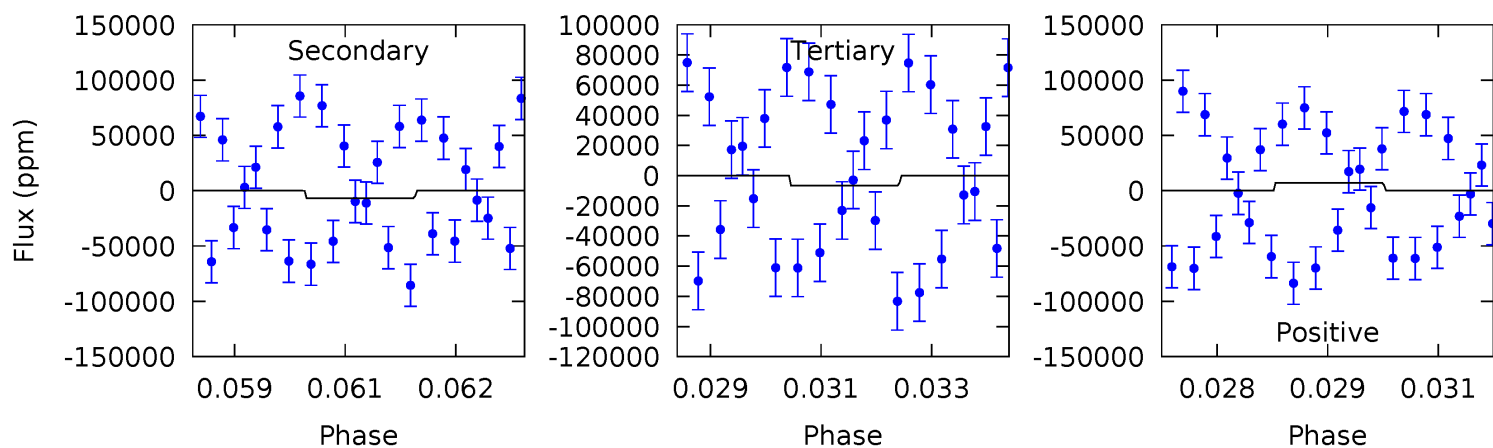
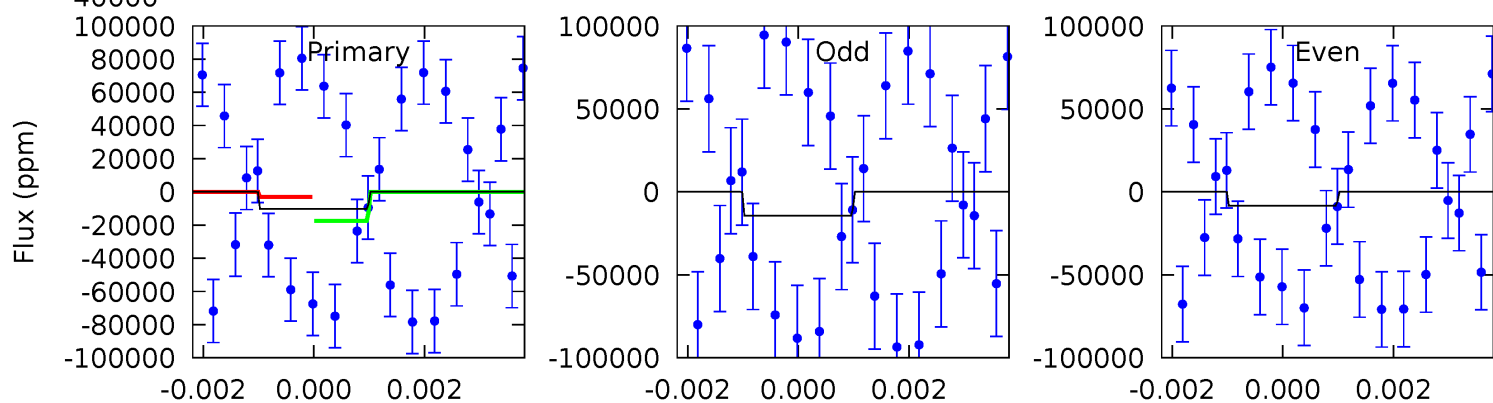
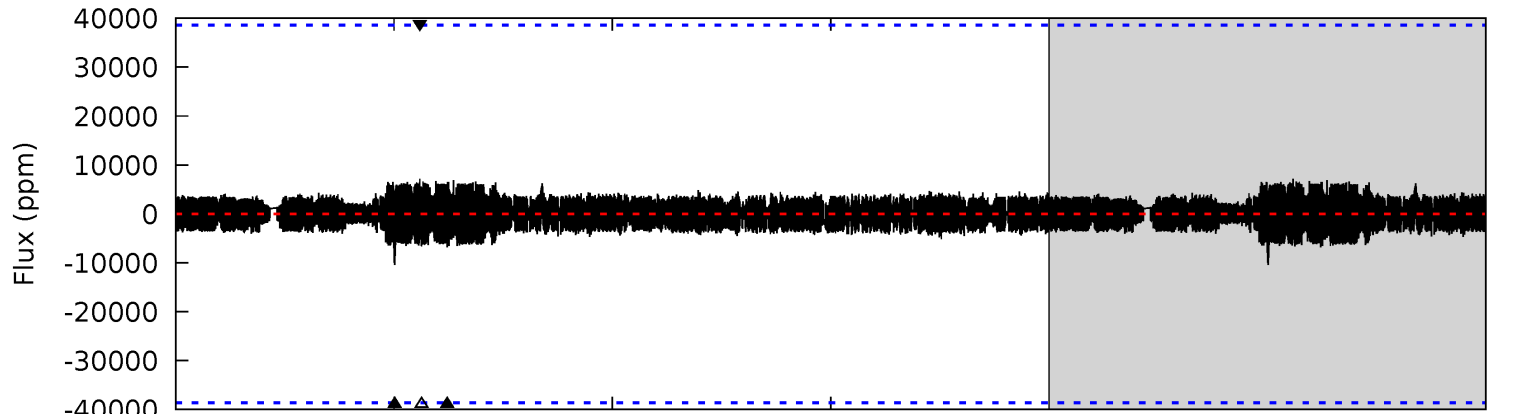
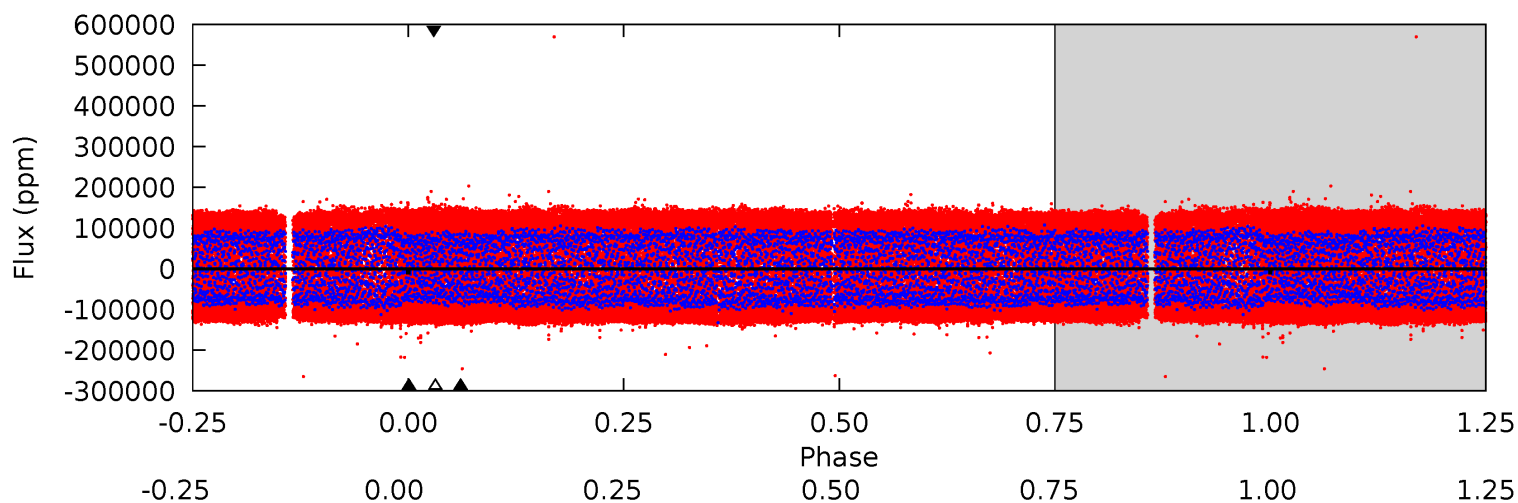
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.8	34.0	33.0	46.8	5.68	3.65	2.37	4.73	-9.03	0.96	-12.8	9.00	0.81	0.55	2.80



Alt Model-Shift Uniqueness Test

008832417-01, P = 686.465448 Days, E = 137.515674 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.44	0.95	0.92	0.99	5.36	3.15	0.34	0.52	0.45	0.03	-0.04	0.39	0.95	0.41	1.00



Stellar Parameters For KIC 008832417

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7241^{+230}_{-345}	$3.677^{+0.513}_{-0.057}$	$-0.280^{+0.250}_{-0.300}$	$3.144^{+0.398}_{-1.594}$	$1.715^{+0.157}_{-0.440}$	$0.078^{+0.409}_{-0.022}$
	+3%/-5%	+14%/-2%	+89%/-107%	+13%/-51%	+9%/-26%	+526%/-28%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008832417-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-39234 ± 1154	$244.57^{+254.75}_{-158.22}$	554^{+46}_{-71}	3886^{+1945}_{-758}	1261^{+8078}_{-955}
Alt.	-6830 ± 7201	$197.47^{+222.48}_{-132.91}$	553^{+47}_{-68}	2945^{+1518}_{-5108}	204^{+2432}_{-222}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

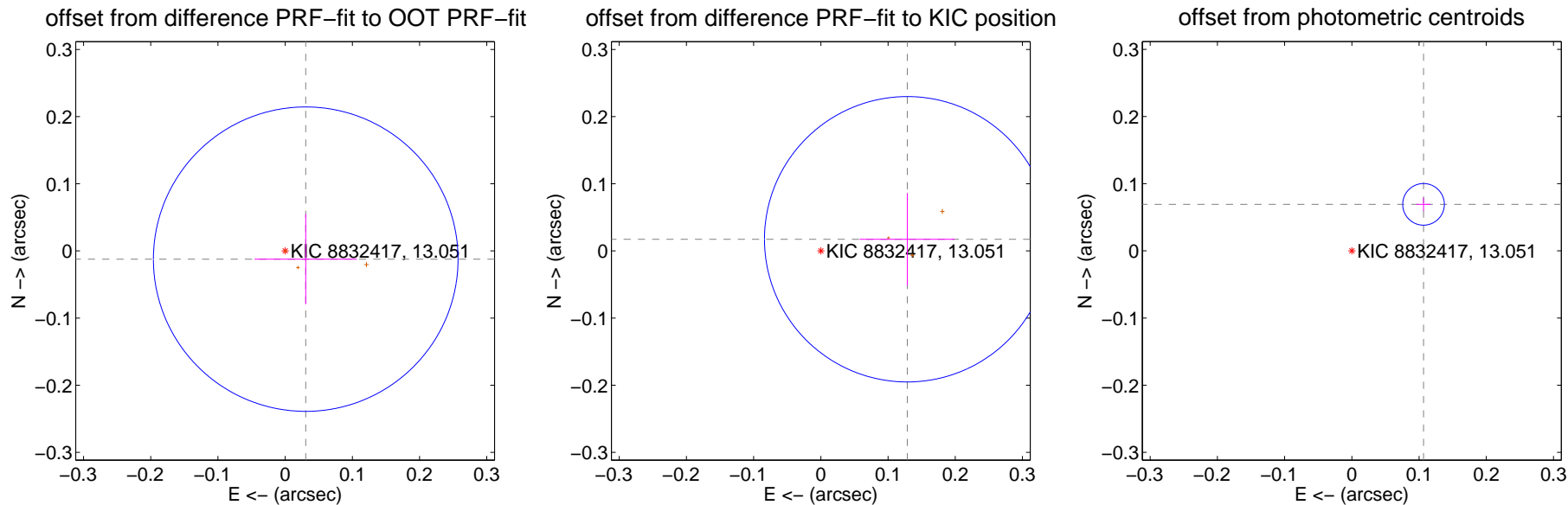
DV Centroid Data

Supplemental centroid analysis for 008832417-01. Kepler magnitude: 13.05. Transit SNR 29.48

There are 0 quarters with good PRF difference image offsets

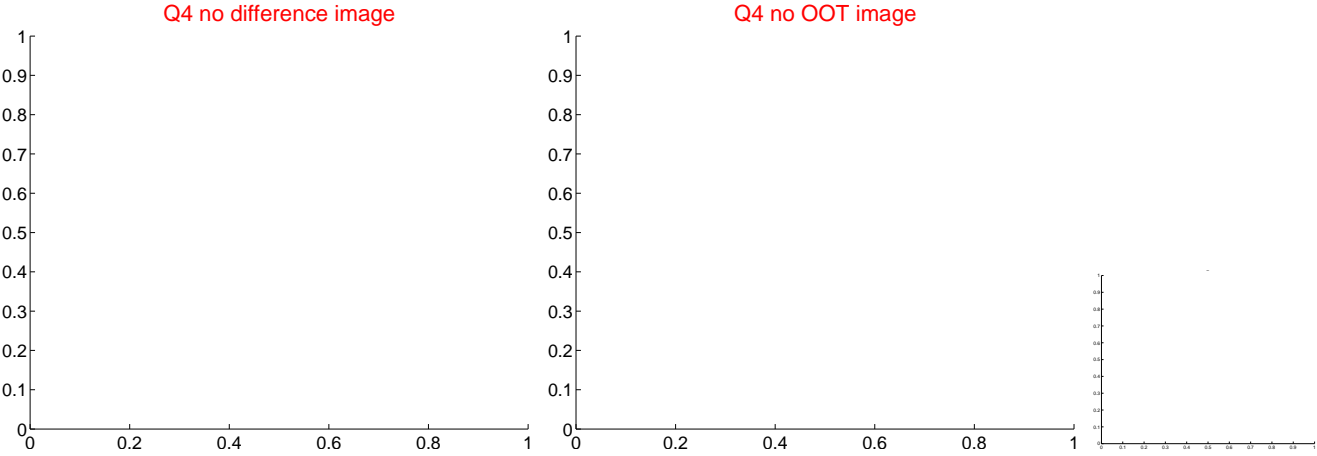
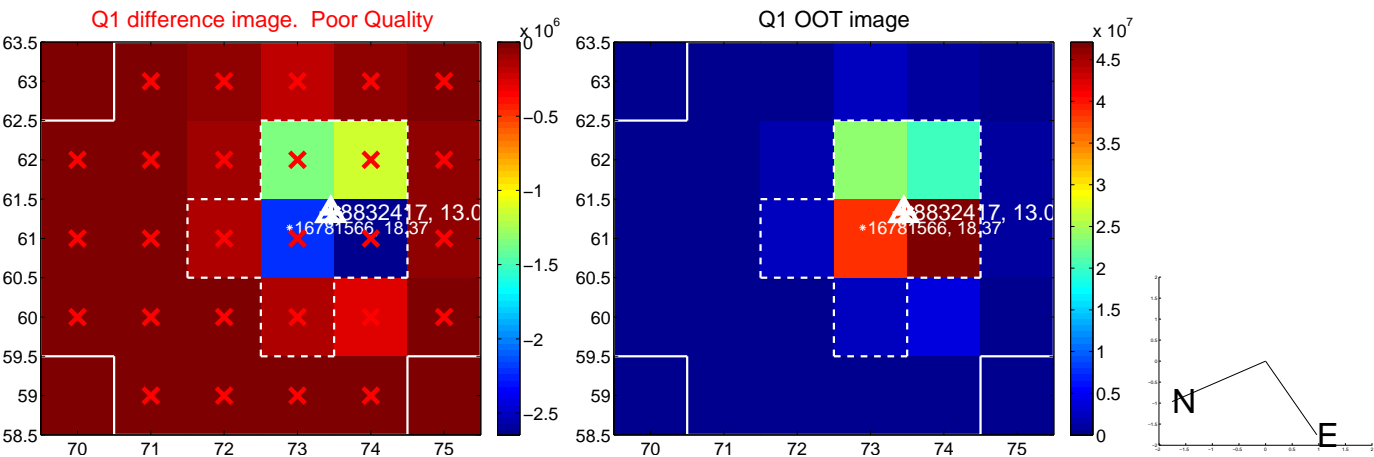
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.076	0.44	-0.031 ± 0.076	-0.012 ± 0.067
PRF-fit source offset from KIC position	0.130 ± 0.071	1.83	-0.129 ± 0.071	0.017 ± 0.069
photometric centroid source offset	0.13 ± 0.01	12.31	-0.11 ± 0.01	0.07 ± 0.01



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

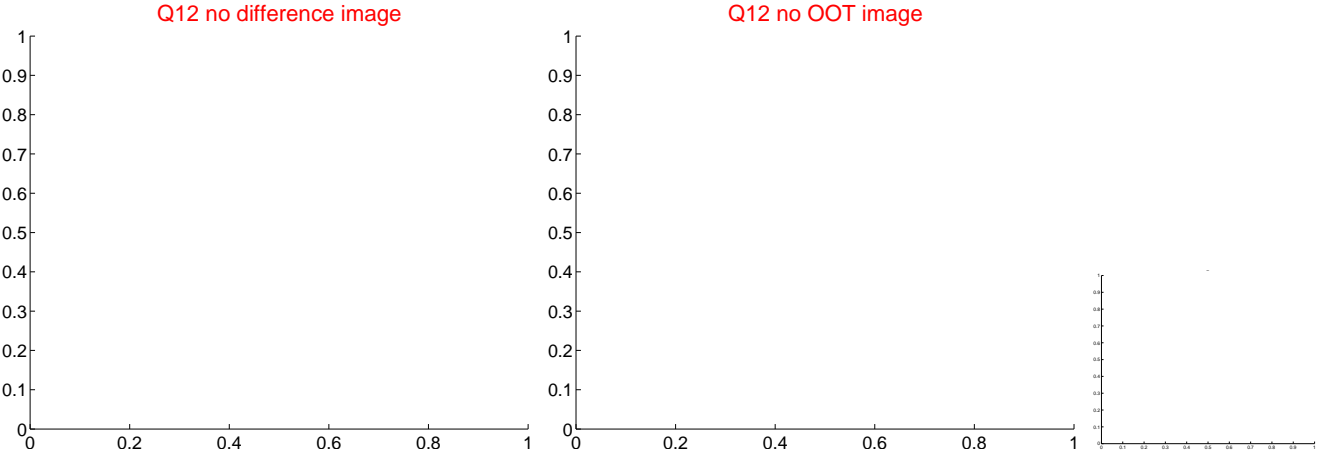
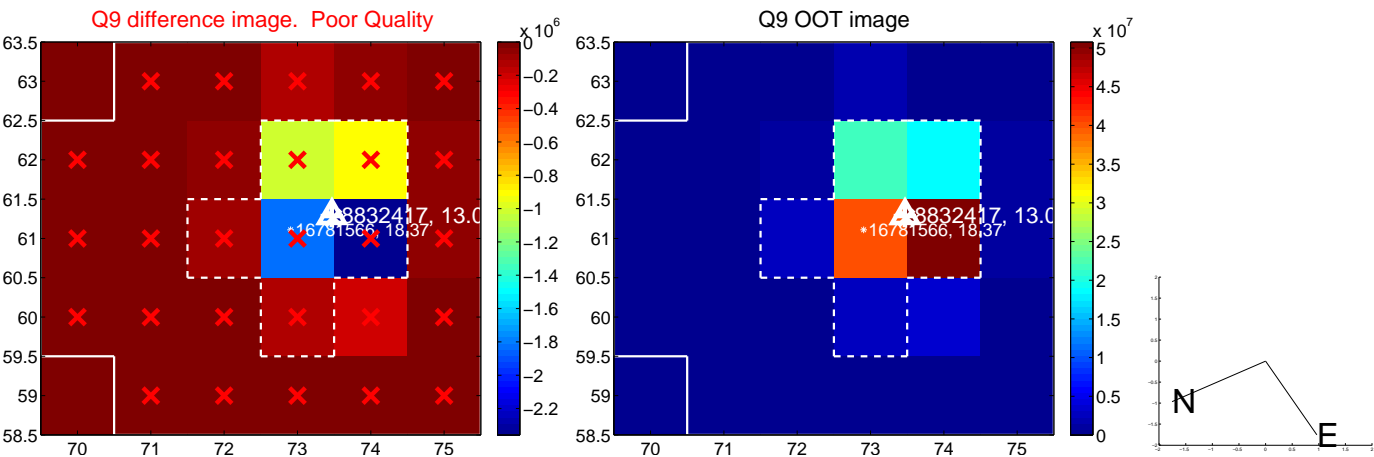
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



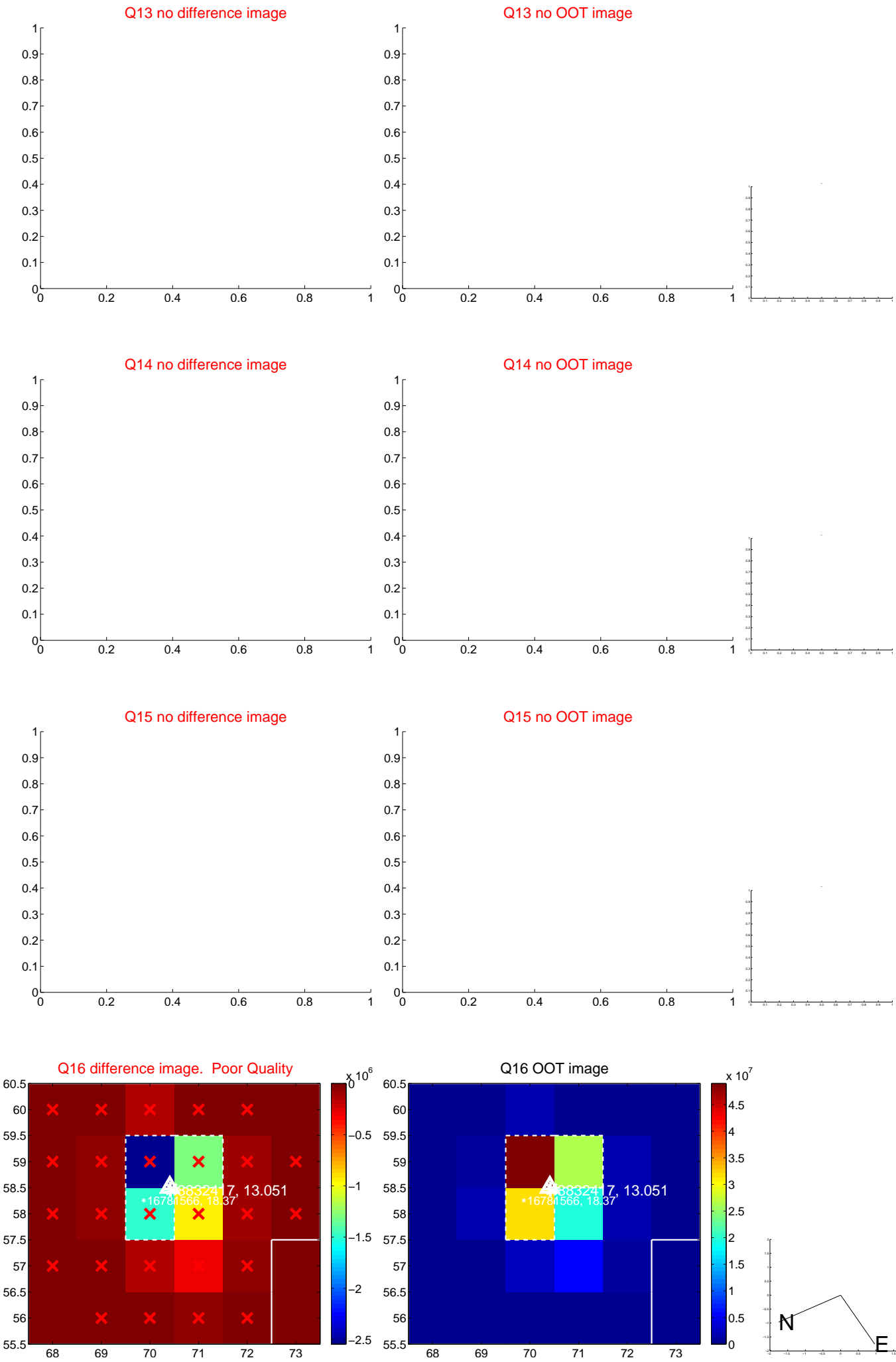
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

